



# Science News-Letter

*The Weekly Summary of Current Science*

Reg. U. S. Pat. Off.



*A Science Service Publication*

Edited by Watson Davis  
Vol. XI No. 311

10¢ a copy \$5 a year  
March 26, 1927

MEDICINE

## Medical Science Freeing Childhood From Disease

By MARJORIE MACDILL

Mumps and measles will be a disgrace to the neighborhood, and whooping cough will be a reminiscence of greybeards, if medical research in children's diseases keeps up the pace of recent years. The last three years have seen scarlet fever receive several body blows, and the next three may witness the beginning of the end of measles if recent important work in Chicago and Detroit is substantiated.

The millenium of a diseaseless childhood is a goal toward which many an unsung knight of the test tube is contributing his bit in laboratories all the way from Munich to Chicago. Already the American Medical Association is predicting that the mortality from diphtheria will be negligible by 1930. This prophecy is based upon study of the steadily declining death rate of this dreaded scourge since the use of toxin-antitoxin as a preventive has become generally practiced. Scarlet fever toxin, lusty infant in the field of preventive medicine, already gives encouraging signs of achieving the same result for scarlet fever.

Numerous germs have been put forward recently by contenders of various nationalities as claimants for the doubtful honor of causing measles. So general is the interest in this most contagious of diseases that several scientists in Europe and America, all working independently, are engaged in what has resolved itself into a neck-and-neck race to produce a practical solution for the measles problem. They cannot all be right, but the more men and women there are in the front line of attack, the more quickly will measles become preventable.

Dr. Ruth Tunnicliff, of the John McCormick Institute for Infectious Diseases at Chicago, has been cultivating in laboratory test tubes a green streptococcus—the scientific name for the little round bacterium that grows in strings, which she has isolated from

the blood of measles patients. With these germs she has immunized goats to measles and from their blood has produced a serum which acts as a preventive of the disease in people. When injected into susceptible children not later than the fifth day after exposure it will, in about 90 per cent of the cases, prevent the onset of the disease. If this goat serum continues to prove efficacious in bringing about even temporary immunity in susceptible children it will be a great help in bringing epidemics under control.

For centuries doctors have been as powerless in the face of measles epidemics as they were in the mediæval visitations of Black Death. Almost every mother knows that when the speckled countenance of measles shows up in the family, there is little she can do beyond keeping down the shades, administering light diet and hoping that the baby won't get it. The

first remedy to make even a dent in the progress of measles, once under way, was convalescent serum, made from the blood of adults recovering from the disease.

This convalescent serum, which has been used in France and Germany for several years, has enough of the protective antibodies in it to prevent the disease from taking a severe course when injected into exposed children. When used immediately after exposure it may give temporary immunity. It has found its greatest use in schools, orphanages and such institutions for children where a general epidemic is a pretty serious proposition. It is likewise invaluable for protecting babies and little children in whom pneumonia and ear troubles are likely to be severe complications. Only small quantities of blood, however, can be taken from convalescing chil-

*(Just turn the page)*



*With diphtheria laid out cold, the cohorts of health are training their guns on scarlet fever and measles. Whooping cough's turn will come next.*

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## Childrens' Diseases

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dren, while adult sources of the protective serum are obviously limited.

Consequently Dr. Tunnickliff's goat serum, if further tests continue successful, offers all the advantages of the human convalescent serum, in addition to being readily obtainable. Measles is a difficult disease to produce in animals, and this is one of the reasons it has baffled science so long. A disease cannot be satisfactorily studied if it cannot be produced experimentally in the laboratory. The sheep family may offer a saving grace where measles is concerned, however, for Prof. Rudolf Dekgwitz of the University of Greifswald in Germany, has made a sheep serum for which he claims results that may be compared to Dr. Tunnickliff's goat serum. If it is administered the first day of the disease, when the temperature begins to rise, it prevents measles and finishes the fever after 24 to 36 hours, or else modifies the disease to a very mild form, he declares. With either alternative the immunity that follows is lasting, a very important consideration.

This serum has been in use longer than the goat serum and has in consequence had a more thorough try-out. Some of the results from its use have not been satisfactory, but much of the value of both of these treatments seems to depend on the point in the progress of the disease at which they are administered.

Last spring in Detroit, Dr. N. L. Fisher and L. W. Ferry announced that they had isolated a streptococcus, which has turned out to be the same organism as that found by Dr. Tunnickliff, that could be used in the production of a measles antitoxin on a large scale. This antitoxin, it was thought, could be used in both preventive and curative treatment of measles. These claims have not been substantiated, but if the Detroit doctors make

(Continued on page 193)

## News-Letter Features

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**SCIENCE NEWS-LETTER**, The Weekly Summary of Current Science. Published by Science Service, Inc., the Institution for the Popularization of Science organized under the auspices of the National Academy of Sciences, the National Research Council and the American Association for the Advancement of Science.

Publication Office, 1918 Harford Ave., Baltimore, Md. Editorial and Executive Office, 21st and B Sts., N. W., Washington, D. C. Address all communications to Washington, D. C.

Entered as second class matter October 1, 1926, at the postoffice at Baltimore, Md., under the act of March 3, 1879. Established in mimeograph form March 13, 1923. Title registered as trade-mark, U. S. Patent Office.

Subscription rate—\$5.00 a year postpaid. 10 cents a copy. Ten or more copies to same address, 6 cents a copy. Special reduced subscription rates are available to members of the American Association for the Advancement of Science.

Advertising rates furnished on application.

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## MEDICINE

**Check Spread of Plague**

Banditry and political upheavals notwithstanding, Chinese health officials, many of them trained in occidental schools of medicine, continue to carry on their campaign to keep down disease. According to information just received by the U. S. Public Health Service from Dr. Wu Lien-Teh, head of the North Manchurian Plague Prevention Service, a severe outbreak of pneumonic plague occurred in Mongolia during November and December.

Stringent preventive measures drew a cordon around the infested area. Traffic into Mongolia was stopped. Careful inspection of railway passengers from Siberia was instituted and strict antiplague measures were enforced on the borders between Mongolia and Manchuria. The medical service in the latter region has been able to maintain a constructive program which has been able to keep the plague situation from getting out of hand in spite of the unsettled state of the country. Manchuria has escaped from the disease and no cases have been reported since the middle of December, according to Dr. Wu's report.

Dr. Wu is an internationally known authority on plague and has written an authoritative treatise on the pneumonic form, summarizing the findings of ancient and modern medicine on this much dreaded disease, which has recently been published by the Health Section of the League of Nations.

Science News-Letter, March 26, 1927

## SOCIOLOGY

**Fewer Youth Suicides**

In spite of the commotion caused by the number of young students who have recently shuffled off this mortal coil, the tendency of the suicide rate among young people has been distinctly downward during the last sixteen years.

Suicides among children under fifteen years old are a negligible cause of death in this country, according to the statisticians of the Metropolitan Life Insurance Co., while the period between fifteen and twenty years takes in only three per cent. of all the suicides in the general population in the country. The suicide rate among white boys on the insurance records was 6.7 for every 100,000 of the population in 1911, and reached a maximum of 7.3 in 1913 and last year was reduced to only 3.9 or about half of that of fourteen years ago.

Science News-Letter, March 26, 1927

## MEDICINE



LUDVIG HEKTOEN

**Legal Medical Authority**

As head of the John McCormick Institute for Infectious Diseases, Dr. Hektoen has rendered invaluable service to humanity in sponsoring and encouraging the development of the work done by this institute in the conquest of scarlet fever, and it may one day be possible to add measles to this record.

Though his reputation as an authority on infectious diseases and immunology is international, it is less well known that he is one of the country's leading medical legal experts. This important aspect of medicine has received less attention here than abroad and Dr. Hektoen has been an active agent in building up this branch of medical education in the United States to the standard attained in the older countries of Europe.

Born in Westby, Wisconsin, in 1863, he received his early medical training at the College of Physicians and Surgeons in Chicago, studying later in the medical centers of Europe. He became associated with Rush Medical College in 1898 and head of the department of pathology at the University of Chicago in 1900. In addition to his present duties as head of the John McCormick Institute for Infectious Diseases, he has been twice elected chairman of the medical division of the National Research Council.

Science News-Letter, March 26, 1927

A British scientist believes that almost up to a century ago there may have been Indians living who could read the mysterious Maya hieroglyphics.

## ASTRONOMY

**New Comet Discovered**

Stearns' comet, discovered on Thursday, March 10, by Dr. Carl L. Stearns, of the Van Vleck Observatory at Wesleyan University, Middletown, Conn., has been observed at Copenhagen, Denmark, according to word reaching the Harvard College Observatory. The Danish observation was made a little after midnight on the morning of Monday, March 14.

Both observers saw it in the constellation of Libra, the Scales, which is directly south about 4:00 a. m., and it was moving northwards into the constellation of Serpens, the Serpent. At both times it was of the tenth magnitude, too faint to be seen except with telescopic aid. As expressed in the celestial equivalents of latitude and longitude, its position when observed at Copenhagen was 6 degrees 11 minutes and 54 seconds south declination and 15 hours 15 minutes and 6.6 seconds in right ascension. The comet was also observed in a position close to this on the morning of Sunday, March 13, by Prof. George Van Biesbroeck, of the Yerkes Observatory in Wisconsin.

Science News-Letter, March 26, 1927

## PEDAGOGY

**Experimental College**

An experimental college, with 250 volunteer students, is to be conducted at the University of Wisconsin in order to find improved methods of teaching freshmen and sophomores.

During the first year the experiment will be limited to 125 freshmen, and in the second year freshmen and sophomores will both be studied.

Announcing the plan, Dr. Glenn Frank, president of the university, states that the experiment will enable the university to "test out forms of curriculum and methods of teaching so radically different from the prevailing curriculum and method that no university would feel justified in adopting them for its entire student body in advance of satisfactory tests under controlled experimental conditions."

President Frank states that the quality of the teaching staff of the experimental college will be such that, whatever method be tried out, the students will not lose by not taking the regular courses. The students will receive the same credit for their two years of experimental education, as if they had enrolled in the main branches of the university.

Science News-Letter, March 26, 1927

# PHOTOGRAPHS OF SCIENTISTS

Science Service has a collection of nearly 2,000 photographs of scientists throughout the world. The eighth installment of this list is published below. Although this list has been checked with care, corrections are requested, since a complete catalog will be issued later. Photographs of scientists not listed are desired.

For the convenience of teachers and scientific enthusiasts, these photographs are offered for sale. Any ten photographs (each postcard size  $3\frac{1}{2} \times 5\frac{3}{8}$  inches) will be sent postpaid for only \$2.00. Enlargements, 8 x 10 inches, are \$1.00 each postpaid. Postcard pictures are finished only in black and white, but enlargements are offered either in black and white or sepia on buff stock. Please specify which.

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(To be continued)

## SCIENCE SERVICE

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## Ninth Down; No Gain

California and Minnesota have joined the list of states whose legislatures this winter have refused to pass anti-evolution bills introduced by Fundamentalists. The Minnesota house committee on education, by a vote of 12 to 5, recommended indefinite postponement of the proposed measure. In California the action of the committee was unanimous. No state legislature so far this year has been willing to join Tennessee and Mississippi in limiting the freedom of teaching in this field, and seven states have anticipated the action of Minnesota and California in declining that doubtful distinction.

Science News-Letter, March 26, 1927

## PHILOLOGY

### Esperanto Tested in Schools

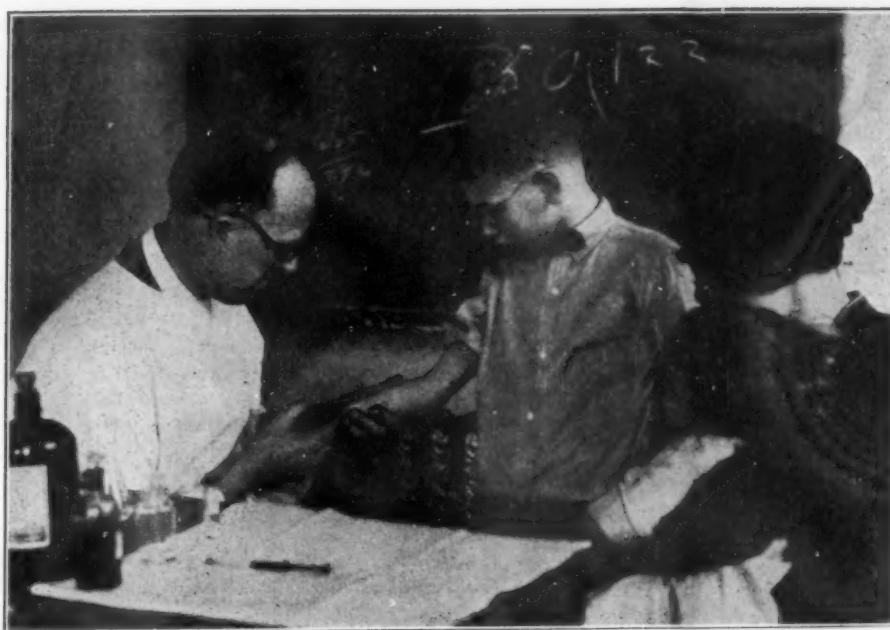
Learning Esperanto or some other simple artificial language is a good introduction to foreign language study for school children, according to Miss Helen S. Easton, of the International Auxiliary Language Association. In a talk before a group of Washington language teachers, Miss Easton pointed out that experiments in teaching Esperanto to school children are being made in New York, and in England, Switzerland, and other European countries. Some high school students have practically no ability to learn Latin, French, or other foreign languages, though their progress in other subjects is normal, Miss Easton declared. If a course in a simple artificial language is given before starting on a real foreign language, such students can be spotted and much time saved and discouragement averted.

Esperanto, the most widely known of the languages invented for international communication, has only sixteen grammatical rules, and there are no exceptions to the rules. Nouns, adjectives, verbs, and other parts of speech are built up from root words by adding suffixes, so that all nouns end in "o," adjectives in "a," and so on. With these rules for construction the students can learn to take a language apart and put it together, and this helps them to understand how real foreign languages are formed, Miss Easton explained.

Another advantage found through recent experiments is that the artificial language awakens the students' interest in words, and their use of their native language tends to improve.

It is estimated that one person in 300 wears a glass eye.

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*An expert in the U. S. Public Health Service is about to give these children both the Dick test and the Schick test that will tell whether they are susceptible to scarlet fever and diphtheria.*

### Childrens' Diseases

(Continued from page 190)

good their promise a way has been opened up for the treatment of measles similar to that now in use to prevent diphtheria and scarlet fever.

When a child comes down with measles in a German family it is a current practice to prevent the disease or to forestall serious complications in younger members of the family by injecting them with the blood from one of their parents. In the densely populated countries of Europe the chances of reaching full-grown manhood or womanhood without contracting measles are very small. It is believed that the periodic subsequent exposures to measles resulting from everyday contacts in a thickly populated community stimulates, during the whole life, production of antibodies in the blood. Consequently the blood of European parents is used as a convenient immunizing agent to prevent this disease or to mitigate its severity in children.

When children are injected early enough, fifty per cent of the cases treated have been found to retain an immunity of several months. In the remaining fifty per cent the disease takes a mild form and confers immunity as lasting as that of a severe case.

To get the best results with this mode of attack on measles the inoculation must take place at an early stage of the game. The German health authorities are endeavoring to teach

this vital point to parents through propaganda distributed to school children, and the method has likewise the sanction of the health section of the League of Nations. Whether or not some such procedure in this country will prove to be another way out of the measles difficulty is yet to be seen.

Mumps and chicken pox are comparatively mild diseases, and because they are relatively benign, will have to wait for the attention of science until the problems presented by the more serious diseases are cleared up. It is thought that the former is caused by a filterable virus that is present during the course of the disease in the saliva. Chicken pox was long confused with small pox, and not until modern times have physicians differentiated clearly between the two.

Whooping cough is still the bad boy among children's diseases. If any philanthropist wants to do a good turn to the boys and girls of the universe he can come across with the where-withal for whooping cough research. Science has thus far been able to do very little about it. The causative germ is generally considered to be a bacillus, but some doctors dispute even this point. Vaccines have been tried and found wanting. Intramuscular injections and occasionally enemas of ether are modern innovations that have been useful in checking severe paroxysms in young sufferers. Radiation with Roentgen rays have been found helpful sometimes. One spe-

(Just turn the page)

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### Childrens' Diseases

(Continued from page 193)

cialist in children's diseases considers whooping cough a condition of acidosis and reports good results from repeated dosings with the simple old fashioned remedy of sodium bicarbonate. But when all is said and done, fresh air and sunlight are mother's best aids when it comes to this long-drawn-out plague of childhood.

All of these diseases are spread by contact and it is wise, particularly where babies and little children are concerned, to keep them away from crowds and public places as much as possible at all times, and especially when an epidemic is abroad. The Schick test will show which are susceptible to diphtheria, and in many public schools is administered as a part of health routine. Those who are found susceptible are given the toxin-antitoxin mixture which renders the child immune to diphtheria for a long time. The toxin-antitoxin mixture is practically harmless, and is administered three different times at intervals of about a week. A similar course is now being worked out for the prevention of scarlet fever.

In 1923 Drs. George F. and Gladys

H. Dick, man and wife, at the John McCormick Institute for Infectious Diseases in Chicago, announced that they had produced experimental scarlet fever in volunteers by inoculating them with streptococci taken from scarlet fever patients. They found that these streptococci would produce a toxin much as diphtheria bacilli do. This toxin, they found after a great deal of experimental work, could be used in a skin test to determine susceptibility to scarlet fever, and it has since been widely used for this purpose. The Doctors Dick also discovered that by giving increasing doses of the toxin to those found susceptible, these persons would become insusceptible and would give a negative reaction to the Dick test. Thus we have a practical method for immunizing children against scarlet fever.

Antitoxin for the cure of scarlet fever is in general use and has done much to alleviate its danger and its frequent subsequent complications, but the general use of the toxin for its prevention will be the next step to make its eradication practicable. There is every reason to believe that the work of the Dicks is a corner stone on which a preventive program is being built up for scarlet fever comparable to that in progress at present for diphtheria.

Research workers are doing everything in their power to simplify these protective measures as much as possible. In these busy days the less time each health-inducing operation takes the greater is the number of children who will benefit by them. So men and women in the laboratory are endeavoring to work out processes whereby busy mothers will only have to send Johnny to the doctor's office once for his toxin-antitoxin treatment instead the three times necessary now. If these trends in preventive medicine are worth anything as pointers, future generations will never know measles or whooping cough because they will be immunized as babies before hospital doors ever open to let them out into a germ infested world.

Science News-Letter, March 26, 1927

All the locust trees are natives of the western hemisphere.

At a recent test in an electrical laboratory a spark at a pressure of 2,100,000 volts leaped 21 feet.

A wireless transmitter in Great Britain starts and stops the fog signals in the Firth of Clyde more than a mile away.

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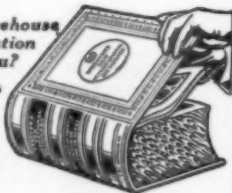
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## ARCHAEOLOGY

**Art Treasures Unearthed**

The marble head of a woman, with hair tinted auburn, found at Corinth, may have been a statue of the poet Sappho, according to Dr. T. Leslie Shear, of Princeton University. Dr. Shear, who has been excavating at Corinth for two seasons under the auspices of the American School of Classical Studies at Athens, found this statue in the ruins of the open-air theater of the ancient Greek city.

"The woman's features reveal a dreamy nature and subdued passion," says Dr. Shear. "Her hair on which are still many traces of its original deep red color, is arranged in an unusual way behind, where it is gathered in a folded veil. Because of the technical treatment of the hair and the sharply cut eyelids, the marble is obviously a copy from a bronze statue, and as it resembles a head of Sappho on a coin of Mytilene, perhaps the original was the famous bronze Sappho made by the sculptor Silanion in the fourth century B. C. The magnificent theater of Corinth would have been appropriately adorned by this superb statue of the auburn-haired Sappho, the tenth muse."

The theater in which the people of Corinth watched plays, athletic events, and gladiatorial contests, was a beautiful and colorful place, Dr. Shear's finds indicate. The scheme of decoration is different from anything that has been found in Roman or Greek theaters.

Besides marble figures of a woman and a man which guarded each side of

*(Just turn the page)*

## HYGIENE

**Most Time Loss from Colds**

The common cold goes to the head of the list as a cause of lost time. In a survey of absences from work in a big industrial firm over a period of ten years, just completed by statisticians at the U. S. Public Health Service, it was found that colds caused a time loss equivalent to 1.4 days per year for every man on the pay roll, and 2.1 days per annum for every female employee. Colds were directly responsible for 39 per cent. of all the absences among the men and for 31 per cent among the women.

Diseases of the general type known as respiratory caused approximately half of all absences but were not so common among the women as the men. Women, it would appear from these records, are more liable to disablement from nervous disorders and

*(Just turn the page)*

## ENTOMOLOGY

**Insects Aid Australians**

Insects are being used, apparently with great success, to save the great livestock ranges of Australia from the ravages of the prickly pear. A report of the sixth year of investigation has recently reached this country and indicates that this extraordinary experiment is about to be crowned with complete success, according to Dr. L. O. Howard, chief of the U. S. Bureau of Entomology.

The beneficial insects are a cochineal or mealy bug, a red spider, a moth larva from South America and another from Texas, and a sucking bug. In many cases the insects have succeeded in reducing the spiny plants to a state of utter collapse.

The fly in the ointment is the presence of a native ladybird beetle, the natural enemy of the cochineal insect. The danger from the ladybird beetle is at this time slight, however, according to E. Mortensen,

*(Just turn the page)*

## ARCHAEOLOGY

**Pollen Dates Relic**

A woolen mantle, worn in Sweden when the early Pharaohs still reigned in Egypt, has had its age approximately determined by a curious combination of botanical and geological knowledge, through the researches of Dr. Lennart von Post of the Museum of National Antiquities here. The garment was found buried at a depth of several feet in a peat bed in the district of Västergötland, carefully folded up and weighted down with three stones, but with nothing about it to indicate how it got there.

Its similarity to Bronze Age garments from Denmark and elsewhere suggested its antiquity. The fact that it had evidently not been buried, but had lain in its hiding place while the moss grew over it to form about five feet of peat, was further evidence of great age. The acid water of the bog had preserved it from decay during the centuries.

Dr. von Post found the key to its age in the pollen grains that were thick in muddy particles clinging to the fabric. Most important among the species represented were oak, linden-elm forest was larger than it alder, and hazelnut as the principal shrub. Exact counts showed that the proportion of the pollen from the oak-linden-elm-forest was larger than it would be in a Swedish springtime "pollen rain" of today, indicating the existence of a milder climate in the

*(Just turn the page)*

## PSYCHOLOGY

**Analyzes Conversation**

"American women talk predominantly about men and clothing. Englishwomen talk most frequently of other women or of themselves."

This is not a bright epigram from a fiction writer's notebook. It is the conclusion of an American psychologist who spent an afternoon and evening listening on a busy London street, and, as a result, carried away notes showing the subject matter of 200 British conversations. The conversations were carefully kept classified in order to show what English men or women say to each other and vice versa.

The psychologist, who is Dr. Carney Landis, of Wesleyan University, has compared his conversation samples with similar collections overheard in the streets of New York and Columbus.

When Englishman meets Englishman the chief topic of conversation is the same as between American men, namely, money and business, Dr.

*(Just turn the page)*

## PHYSIOLOGY

**Revives "Dead" Hearts**

A "heart hormone," a physiologically powerful chemical compound secreted within the living heart and acting to keep it beating ceaselessly, has been discovered by Dr. Ludwig Haberlandt of the University of Innsbruck. It is to be classed with the secretions of the ductless glands, such as the thyroid in the throat and the adrenals near the kidneys, which have far-reaching effects in the lives of men and animals, and some of which are now widely used in medicine.

Prof. Haberlandt states that the existence of some such internal chemical stimulus to action had long been suspected, because frequently hearts removed from the bodies of animals kept on beating outside, which they would not have done had the stimulus been supplied by the nervous system alone. He found that extracts from a portion of the heart of the frog would act on the stilled heart removed from another frog, causing it to contract again. The extract was able to cause this reaction even in hearts that had been lying still in glass dishes for as much as three and one-half days.

A similar extract from the hearts of dogs, having comparable effects, has been obtained in Brussels by Dr. J. Demoor, and is cited by Prof.

*(Just turn the page)*

### Analyzes Conversation

(Continued from page 195)

Landis declares in a report to the *Journal of Abnormal and Social Psychology*. But when an Englishman talks to a woman he does not talk shop or sports, as American men tend to do when talking to a woman. Instead, the Londoner seems to converse rather about women, clothes, or himself. The English woman's remarks to a man are apt to be along the same lines as if she were talking to another woman, that is, about women and about herself.

Dr. Landis concludes that "The limited sample of conversation obtained indicates that the Englishman adapts his conversations to the interests of his feminine companion, while American studies show that the American woman adapts her conversations to the interests of her masculine companion."

"There is a greater variety in the conversations heard in London streets than in those heard on American streets," Dr. Landis finds.

Science News-Letter, March 26, 1927

### Revives "Dead" Hearts

(Continued from page 195)

Haberlandt as proof that his "heart hormone," as he has named the compound, is of general occurrence among vertebrates and of physiological importance to warm-blooded animals.

The Austrian physiologist is of the opinion that his newly discovered hormone may come to have considerable importance in medicine, as a stimulant to weak hearts. He points out that an abundant supply is easily available, in the hearts of animals killed for meat in the packing houses.

Science News-Letter, March 26, 1927

Aviators refer to a dirigible as a "rubber cow".

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### Insects Aid Australians

(Continued from page 195)

an American assistant to the Australian Government. The ladybird beetle is feeding upon grass-eating mealy bugs and as yet has shown no interest in the mealy bugs that are being used against the prickly pear. By the time the ladybird beetle turns its attention to these helpful mealy bugs, it is hoped that the danger from prickly pear will be over.

This is only the second experiment of the kind ever tried. The first one was carried on in Hawaii against the Lantana weed. It was not a complete success, since one of the insects introduced to attack the Lantana weed has recently attacked a valuable related plant. The prickly pear experiment is safer, Dr. Howard said, because there is no cultivated plant related to this cactus that would be endangered by introduced insects.

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### Pollen Dates Relic

(Continued from page 195)

North at the time the mantle was laid away.

Such a mild climate is known from geological evidences to have followed shortly after the disappearance of the last patches of glacial ice in the south of Sweden, at about the time when the New Stone Age was giving way to the Age of Bronze in that country. It was followed by a period of severer climate, ushering in the Iron Age. This mild-climate pollen thus determines the former owner of the mantle, who so carefully folded it up and hid it under three stones in a ditch, as a man of the Early Bronze Age.

The careful workmanship of the weaver, who made the cloth out of a mixture of fine wool and the hair of game animals, probably deer, is described by Emelie von Walterstorff, and the possible romantic history of the garment, which has a number of dagger-holes jabbed through it, is hinted at by Sune Lundquist. Mr. Lundquist states also that the toga of the Romans was quite similar in shape to these elliptical Bronze Age mantles, though differing in size and manner of wearing. A shorter Roman cloak, the "trabea," worn largely by priests and soldiers, was even more nearly similar.

Science News-Letter, March 26, 1927

The Hatteria, an animal found in New Zealand, has in its early life an eye in the back of its head, but this degenerates with maturity.

### Art Treasures Unearthed

(Continued from page 195)

the entrance, the orchestra was adorned with a number of fine statues. A sculptured frieze depicting a fierce battle between the Greeks and the Amazons was apparently a part of the stage wall.

The walls of the theater, buried for centuries under more than 25 feet of earth, are still covered with paintings in brilliant colors.

"One scene," says Dr. Shear, "represents an acrobat who is making a polevault over the back of a charging leopard. Both man and beast are caught for the picture at the moment when they are in the air. In another acrobatic scene the athlete, with hands on the ground and head raised, is about to take off for a handspring over the back of a huge lion that is rushing at him.

"The brilliance of the colors on the wall, the originality of the themes and the vivacity of the action indicate amazing skill and technique in the execution of decorative painting on a large scale at the beginning of the Christian era."

Coins and lamps dating from the fourth century A. D. are the most recent objects found at the ruins, and Dr. Shear concludes that the theater was destroyed when Alaric the Goth burned Corinth in 396 A. D.

The wall of the sanctuary to Athena, which archæologists have sought for a number of years, was discovered near the theater at the close of last season's work, but this important ruin has not yet been completely uncovered.

Science News-Letter, March 26, 1927

### Loss from Colds

(Continued from page 195)

diseases of the throat and tonsils, but their disabling illnesses are shorter on the whole than the men's. This condition in favor of the so-called weaker sex is counterbalanced, however, by the fact that their absences were more numerous, totalling 14 calendar days apiece during the whole ten years, while that of the men reached only 8.9.

A high proportion of illnesses occurred among the younger employees, notably among the women. The statisticians suggest that this circumstance may be in part accounted for by the dropping out of the less healthy. The group representing the ages 30 to 35, they state, seems as a whole to have a greater resistance to colds, tonsillitis, and stomach disorders than the younger ages.

Science News-Letter, March 26, 1927



# Floating Factories and the Fisheries

By LEWIS RADCLIFFE

As Deputy Commissioner of Fisheries, in the U. S. Department of Commerce, Mr. Radcliffe writes on fisheries with much authority.

Fishing excursions of our boyhood days were largely limited to the places we could reach by walking or driving old Dobbin. The advent of the automobile and the era of good roads has made the inaccessible places accessible and now one may fish on the other side of the continent. Except for stocking his vessel with a fare of salt fish, the demand for which has now largely vanished, formerly the commercial fisherman ventured only such distances from landing ports as he could return with a stock of fresh fish. Somewhat tardily the fisherman is seeking the aid of science—engineering, technology and chemistry. Thus he is developing ways of greatly expanding his sphere of operation. This effort to make available more distant sources of supply is most commendable.

The better insulation of the holds of the fishing vessels and the development of refrigeration machines suitable for installation and operation on board ships have greatly increased the distance the fishermen may go from his home port. California fishermen are enabled to take much greater toll of the fish supply off the coasts of Lower California; salmon are brought to this country from Kamchatka, the French have built a vessel for operation off the African coast and other European countries with a diminishing supply in the North Sea and around Iceland are now drawing upon the fishery resources of Greenland. The day is at hand when the fishermen may supply our table with aquatic delicacies from the remote corners of the earth.

Norwegians have perfected whaling ships capable of operating in the Antarctic, thousands of miles from their home port. The ship is fitted with a false bow which can be tilted downward into the water to serve as a runway up which one of these huge mammals may be drawn to be cut up. Machinery aboard extracts the oil from the blubber and converts the carcass into fish meal. These ships are independent of a land base and having filled their storage tanks with whale oil which is in special demand by soap-makers, may steam to whatever world port holds forth the best promise of a profitable market for their cargo. In recent years the number of whaling

companies has increased rapidly and no ocean area is exempt from whaling operations. In excess of 10,000 whales are killed annually, the maximum yield of oil being reached in 1923, amounting to 44,000,000 gallons. Millions of gallons of whale oil now find a ready market in this country.

This freedom of operations without restraint on the high seas has aroused the fear of intelligent observers that whales may soon become commercially extinct. The only possible control of such operations must be found in international agreement. Such a solution is now being sought by no less

(Just turn the page)

## PSYCHOLOGY

### Tells How Mind Works

The scientific investigator should apply his science to the improvement of himself, Dr. William E. Ritter, president of Science Service, declared in a lecture before the School for Social Research in New York. Dr. Ritter, who spoke on how the scientific investigator uses his mind, stated that the conduct of human beings is about the most important subject for scientific research.

The trained scientist uses his mind as effectively as the opera singer uses his voice, or as effectively as the circus performer handles his body, he pointed out.

The scientist, who is often pictured as cold and matter-of-fact, needs imagination as much as the artist does, and would be helpless without it, Dr. Ritter said. The scientist, however, is bound by the rules of his game far more rigidly than the artist, because he must check the imagined things against real things more rigorously than the poet or novelist.

"This ability to use the mind for framing imaginary or hypothetical answers to questions, and then to work tirelessly year in and year out, if need be, to prove whether the imaginary answers do or do not correspond to the objective realities in the case is exceedingly far-reaching in its significance for the discovery of truth, and for human welfare," he stated.

The investigator must train himself intensively if he is to be a specialist in using his mental processes and his sight, hearing, and other senses, and if he is to direct his interests and emotions toward scientific achievement, Dr. Ritter showed.

Science News-Letter, March 26, 1927

## Apes To Talk With Fingers?

A chimpanzee might be taught to talk with its fingers, as deaf people talk, more easily than it could be taught to imitate sounds of human speech, in the opinion of Dr. Robert M. Yerkes and Margaret S. Child, of the Institute of Psychology at Yale University.

Several scientists who have observed and studied higher apes have tried to teach them to say words, but without much success, these psychologists state in reporting in the *Quarterly Review of Biology* what is now known about anthropoid behavior.

"Perhaps the chief reason for the ape's failure to develop speech is the absence of a tendency to imitate sounds," Dr. Yerkes explains. "Seeing strongly stimulates to imitation, but hearing seems to have no such effect."

He believes that the sounds made by apes are not language, but are primarily emotional expressions, which are not learned by imitation.

A French scientist, Louis Boutan, who observed a female gibbon for five years, has concluded that a young child who has not learned to speak, works like the gibbon. A child who is beginning to talk no longer works like the ape but directs its efforts along a definite line, like a man. The difference, according to this investigator, is not due to the age of the child, but the development of language, which the ape lacks.

Both scientific and popular interest in the higher apes has increased steadily and greatly in the first quarter of the present century, the psychologists report.

Science News-Letter, March 26, 1927

## ENGINEERING

### Forty-Knot Liners

New York to Cherbourg in four days, to Naples in five days, and Italy to Buenos Aires in seven days, is the prospect of Italian shipping interests. Two vessels capable of forty knots, which would enable these times to be made, are now being contemplated. They are to be called the *Rex* and the *Dur*, and are to have a displacement of 35,000 tons each. According to a statement attributed to Premier Mussolini, these ships will be possible as a result of a new and secret invention in machinery, which will give power without vibration. The premier also stated that only one class of passenger will be carried on these ships.

Science News-Letter, March 26, 1927

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### Floating Factories

(Continued from page 197)

an august body than the League of Nations.

A recent development on our own coasts had added emphasis to the dangers resulting from unrestrained operations on the high seas. California authorities have constantly striven to restrict the amount of sardines—so abundant off their coast—which shall be used by the reduction plants for conversion into oil and meal. This has been done so that the great sardine canning industry may have an ample supply to satisfy the demand for this food delicacy. This "war baby" promises to become a permanent state industry, and is now producing more than a million cases of canned sardines per annum.

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### SCIENCE SERVICE

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A huge yellow flower found in the jungle of Sumatra is three feet in diameter.

The first permanent photographic negative ever made is in the Science Museum in London.

The popular belief that snakes should be kept on ice is unfounded, as snakes are creatures of warm climates.

A short time ago a Nevada corporation anchored a fully equipped floating reduction plant within the limits of Monterey Bay but three miles offshore and proceeded to take sardines outside the three-mile limit for reduction purposes. The State Fish and Game Commission promptly took action and filed suit for a permanent injunction to restrain the company from continuing operations and this has been granted.

The menace still remains, and unless some form of international cooperation is evolved we may have another "rum row" off our coasts busily engaged in mopping up the fish supply with utter disregard of the needs for conservation and bootlegging the manufactured products into any port where they can find safe entry.

The most novel development in floating fish factories is that of the "Calgary," a French vessel of over 2,600 tons. This vessel is being provided with powerful refrigeration equipment and three large cold storage compartments with a capacity of 800 tons of fish. There are six retorts on board. One will be used for cooking lobsters and crayfish; another for making gelatin; two, capable of handling 40 tons of fish and fish waste per 24 hours for conversion into oil and fertilizer; and two others with a capacity of five tons each for the steam extraction of oil from the livers of sharks and rays. There are two oil storage tanks, one of 26,000 gallon capacity for storing fish oil and one of nearly 400 gallons for liver oil. Although it is proposed to operate the vessel off the west coast of Africa it has been suggested that the vessel may visit Iceland, Greenland, and even North Atlantic fishing banks adjacent to our own coasts.

The power of science in making far distant resources available is well illustrated by these developments. Unless subjected to proper international control, these same developments may encompass the ruination of important aquatic resources and leave us poorer than before.

*Science News-Letter, March 26, 1927*

Where the chimney swifts go in the winter after they get as far south as the Gulf of Mexico unknown.

The inventor of the marine chronometer, John Harrison, received a reward of about \$100,000 from the British government.

Wider highways equipped with modern signal devices are urged by the American Road Builders' Association to lessen rural traffic accidents.



## NATURE RAMBLINGS

By FRANK THONE



55

### Premature Blossoming

If your apple or peach tree bursts into bloom a couple of weeks ahead of time, that is no cause for congratulation. Your crop will not be any earlier, and you may lose part or all of it through a last kick of dying winter, sending a frosty night or turning an April shower into a brief but damaging snowstorm. More to be congratulated are the conservative trees, that hold back their flowers a few days over the normal time.

It is this desirability of late blossoming on the part of fruit trees that really makes the famous fruit regions of Michigan and New York. Both these areas, it will be noted, lie to the eastward of one or another of the Great Lakes; and northwest winds blow most of the time over the water toward the land. In the spring, when there is still much ice floating in the lakes, these winds are constantly chilly, and keep down the temperature over the land, which would normally warm up much more rapidly. The city of Buffalo, for example, is known among weather sharps for its late, slow-but-sure springs. These late springs hold back the blossoming of the orchard trees until they are fairly safe from night frosts that might be brought by a sudden backing-up of the wind.

Inland, the same effects are sought by wise farmers who want little orchards of their own, by planting the trees on the north slopes of hills, which warm up much more slowly than do the sun-facing south slopes, and thus in their own way safely retard blossoming. The best part of a hill for tree-planting is neither at the top, exposed to the wind, nor at the bottom, where the heavy, cold, frost-laden night air drains. It is along the side, where partial shelter is afforded and where the cold air can flow through as run-off water flows during a rain.

Science News-Letter, March 26, 1927

Naturalists say that the grizzly bear never attacks a man except when disturbed.

## Distemper and Influenza

Hope is expressed by the British Medical Research Council, in its annual report just issued, that a solution of the influenza problem may come from research in progress on dog distemper. Since distemper in dogs is very similar to influenza in human beings, it is thought that the right weapons for attack on influenza may be forged by the experimental study of the animal diseases most closely resembling it.

This beam of light into the fog of the influenza proposition is dimmed somewhat, however, by the fact that in four years of research instituted by the Field Distemper Fund workers have not succeeded in cultivating the causative virus outside the animal body. Ferrets, which are highly susceptible to the disease, can be immunized by a killed or inactivated virus but this weakened virus gives only temporary immunity to dogs. The susceptibility of individual canines to distemper varies greatly, thus adding to the difficulty of testing the effect of protective vaccination.

In order to make immunization of dogs practical, say medical authorities, a virus of known and constant potency must be obtained, the dosage of which can be accurately standardized. Until the virus can be cultivated outside the animal body the protection afforded is incomplete and uncertain. A practical method can only be reached when the nature of the virus and its laws of behavior have been ascertained more completely, the Medical Council points out. When and if these facts are established, however, they may constitute definite signposts to follow in the still more obscure and dangerous disease afflicting man.

Science News-Letter, March 26, 1927

### Ultra-sleeves of Armor

The balloon sleeves that were the last word in feminine finery in the leg-of-mutton era when mother was a girl, have nothing on a pair of huge puffed, engraved and gilded sleeves of armor recently acquired by the Metropolitan Museum of Art.

The evolution of mediæval armor followed along lines comparable to that followed by some prehistoric monsters who developed horns, teeth and fins to the point where ungainliness superseded usefulness, according to Bashford Dean, curator of armor of the museum. During the first half of the 16th century, armor had begun to follow the outlines of the current fads

of fashion. Clothes were no more designed to fit under the armor, but the armor was made to fit the clothes. Foppish princelings and affluent nobles insisted that armorers hammer out hardware to surround their immense sleeves and abbreviated oxford bags, he explained.

The newly acquired pieces are thought to have come originally from the Radzivil family, an ancient line of princes that held land near the frontier of Poland and Russia, and date back to around 1525. This opinion is strengthened in Mr. Dean's estimation by their resemblance to a richly engraved backplate from the same sources whose fine workmanship bears a close resemblance to the etching on the sleeves.

Science News-Letter, March 26, 1927

## ENTOMOLOGY

### Disease-Bearing Insects

The world needs more men to study the insects that are known to carry diseases and the forms that are most closely related to them.

There are whole groups of such insects whose intimate biology is little understood, the study of which should be urged and amply supported, according to Dr. L. O. Howard, chief of the U. S. Bureau of Entomology. Knowledge of the transmission of disease by insects, he explains, has increased so rapidly since the initial discoveries in this work that no one has had the opportunity to survey the field carefully and to plan future work comprehensively and systematically. What has been done thus far has been accomplished by isolated individuals without the very best facilities, and the possibilities of the future abundantly justify the careful training of a large body of skilled workers who should be given adequate financial support.

There are many still unsolved problems relating to insects known to carry diseases of man or animals that should be attacked at once, continued the well-known entomologist. Since the control of these insect carriers and potential carriers is the object of such a program of research, the importance of the trained economic entomologist can hardly be over-emphasized.

There is urgent need of a centralized foundation where a general scheme can be elaborated for a systematic covering of this whole field and which should have enough funds to finance all investigations which bear on the subject.

Science News-Letter, March 26, 1927

Spiders have eight eyes.

# How to Use Key-Word Feature of News-Letter

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GN Anthropology. Somatology. Ethnology. Ethnography. Prehistoric archaeology.  
GR Folklore.  
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L Education.  
M Music.  
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P Philology and linguistics.  
Q Science. General.  
QA Mathematics.  
QB Astronomy.  
QC Physics.  
QD Chemistry.  
QE Geology.  
QH Natural history.  
QK Botany.  
QL Zoology.  
QM Human anatomy.  
QP Physiology.  
QR Bacteriology.  
R Medicine. General.  
S Agriculture. General.  
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SD Forestry.  
SF Animal culture. Veterinary medicine.  
SH Fish culture and fisheries.

SK Hunting. Game protection.  
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TD Sanitary and municipal engineering.  
TE Roads and pavements.  
TF Railroads.  
TG Bridges and roofs.  
TH Building construction.  
TJ Mechanical engineering.  
TK Electrical engineering and industries.  
TL Motor vehicles. Cycles. Aeronautics.  
TN Mineral industries. Mining and Metallurgy.  
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110 Metaphysics  
120 Special metaphysical topics  
130 Mind and body  
140 Philosophical systems  
150 Mental faculties. Psychology  
160 Logic  
170 Ethics  
180 Ancient philosophers  
190 Modern philosophers  
200 RELIGION—  
210 Natural theology  
220 Bible  
230 Doctrinal. Dogmatics. Theology  
240 Devotional. Practical  
250 Homiletic. Pastoral. Parochial  
260 Church. Institutions. Work  
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280 Christian churches and sects  
290 Ethnic. Non-Christian  
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310 Statistics  
320 Political science  
330 Political economy  
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410 Comparative  
420 English  
430 German  
440 French  
450 Italian  
460 Spanish  
470 Latin  
480 Greek  
490 Minor languages  
500 NATURAL SCIENCE—  
510 Mathematics  
520 Astronomy

530 Physics  
540 Chemistry  
550 Geology  
560 Paleontology  
570 Biology  
580 Botany  
590 Zoology  
600 USEFUL ARTS—  
610 Medicine  
620 Engineering  
630 Agriculture  
640 Domestic economy  
650 Communication. Commerce  
660 Chemical technology  
670 Manufactures  
680 Mechanic trades  
690 Building  
700 FINE ARTS—  
710 Landscape gardening  
720 Architecture  
730 Sculpture  
740 Drawing. Decoration. Design  
750 Painting  
760 Engraving  
770 Photography  
780 Music  
790 Amusements  
800 LITERATURE—  
810 American  
820 English  
830 German  
840 French  
850 Italian  
860 Spanish  
870 Latin  
880 Greek  
890 Minor languages  
900 HISTORY—  
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## First Glances at New Books

**DOWNLAND MAN**—H. J. Massingham—*Doran* (\$6). A scholarly but easy-to-read examination of megalithic monuments in Britain, with comparisons in other lands. After the popular attention that has been concentrated recently on man's development as an individual, in the Old Stone Age, this book will be doubly useful and welcome for the light it brings to the question of the early development of permanent social structures.

Science News-Letter, March 26, 1927

**THE DOMESTIC OIL BURNER**—Arthur H. Senner—U. S. Department of Agriculture Circular 405—*Government Printing Office* (10c). A pamphlet for all who use or contemplate using oil for heating their homes.

Science News-Letter, March 26, 1927

**CASEIN AND ITS INDUSTRIAL APPLICATIONS**—Edwin Sutermeister—*Chemical Catalog* (\$5). Casein nowadays is a good deal more than the cheese from which its name was originally derived; it is paint, glue, billiard balls, photographic film, soap, infants' food, or what have you. This monograph gives in compact and complete form the known facts about the uses, chemistry and technology of this interesting and versatile substance.

Science News-Letter, March 26, 1927

**EQUILIBRIA IN SATURATED SALT SOLUTIONS**—Walter Charles Blasdale—*Chemical Catalog* (\$4.50). A summary of our knowledge in one important phase of the study of water solutions of electrolytes.

Science News-Letter, March 26, 1927

**INDIAN REMAINS OF THE PENOBSCOT VALLEY AND THEIR SIGNIFICANCE**—University of Maine Studies, Second Series, No. 7—Walter B. Smith—*Maine University Press*. Relics of prehistory which Maine soil has yielded are described, and Mr. Smith presents a plea that future discoverers of such objects in Maine have their finds carefully identified, lest long sought clues to Norse occupancy of the region be tossed into the scrap heap.

Science News-Letter, March 26, 1927

**ANCIENT POTTERY FROM TRUJILLO**—Archaeological Exploration in Peru, Part I—A. L. Kroeber—*Field Museum of Natural History*. Another step forward in tracing the complex story of pre-Hispanic Peru has been taken by Dr. Kroeber in this study of pottery of the Peruvian coast.

Science News-Letter, March 26, 1927

## PHYSICS

### Electricity and Frogs' Legs

Quotation from chapter on Physiology by W. D. Halliburton in *PROBLEMS OF MODERN SCIENCE*. New York: Henry Holt and Co. 1922.

Towards the end of the eighteenth century there was in Bologna, in Italy, a man, destined for the Church of Rome, but subsequently turned out for his heretical opinions, who then happily applied himself to Science and became the Professor of Anatomy and Physiology at the university of his native city. His name, which has reverberated down the ages, was Galvani. Those were not the days of palatial laboratories . . . and, so far as one can gather from what we know of Galvani's work, his arrangements were somewhat primitive, and he either used his laboratory as a kitchen, or, what seems much more probable, he used his wife's kitchen as his laboratory, and Mrs. Galvani had her share in the accidental discovery which took place during the preparation of a midday meal. She was preparing some frogs' legs for dinner, and had got them hung up in a row. Her husband was working a frictional electricity machine in the neighborhood—in the same room—and she noticed and called her husband's attention to the fact that these apparently dead frogs' legs began to twitch. Galvani was so struck with this singular occurrence that he wanted to try the effect of atmospheric electricity upon the frogs' legs, and, hoping for a thunderstorm, he went up on the roof and hung up his row of frogs' legs on copper hooks, attached to a railing made of iron. Instead of a thunderstorm there came a gentle breeze, and he noticed that when the toes of the frogs were blown against the iron railings they again began to twitch; i. e., he discovered that, by the contact of dissimilar metals, he had made what was the first electric battery, and, in his contemporary Volta's hands, the voltaic cell was constructed, and that was the progenitor of our modern batteries and of the great branch of electrical science whose name, 'galvanism,' is an indication of its origin. As Helmholtz said, writing nearly a hundred years later, if this little experiment with the frogs' legs and the dissimilar metals had been disregarded as being of no use to anyone, what would not the world have lost, for, in a comparatively short time after the discovery, electric messages by telegraphic wires were traveling with the speed of lightning from one end of Europe to the other. If Helmholtz had been alive now, how much

more might he have expanded that theme, for, since he died, radium, X-rays, and other forms of radiant energy related to electricity have been discovered, and have proved of benefit to mankind not only from the commercial, but also from the medical point of view, by relieving disease and suffering.

Science News-Letter, March 26, 1927

## PALEONTOLOGY

### Coal Age Fossils

The weird forests of the Coal Age that grew in the widely separated swamps of what are now the States of Rhode Island and Missouri were strikingly alike in the plants that composed them, according to Dr. Eda M. Round, writing in the *Botanical Gazette*. Dr. Round has made a close comparison of fossil plant remains from the sandstones and shales of these regions, and states that over fifty per cent of the plant species of the two localities were identical. None of the species that grew there those many millions of years ago survives into the present time, but the nearest relatives of some of them are now represented by ferns, club-mosses and scouring-rushes or horsetails. Two classes of plants, in some ways the most interesting of all, are now totally extinct. These were a group of trailing or vine-like plants related to the ferns, and another group with leaves like ferns but bearing true seeds, which are unknown among modern ferns.

Science News-Letter, March 26, 1927

## FORESTRY

### Conserves Turpentine Trees

The producers of yellow pine lumber in the South need no longer regard the producers of turpentine and rosin as enemies, destroying the best part of their trees. A new method of extracting the valuable oleoresin "gum" which is the basis of naval stores conserves nearly two-thirds of the wood hitherto wasted through damage caused by the long scars made on the pines near their bases, according to Dr. Eloise Gerry of the U. S. Forest Products Laboratory at Madison, Wisconsin. Dr. Gerry, who has just returned from a tour of conferences with the naval stores producers in Mississippi, Georgia and Florida, stated that the new method obtained a better yield of gum from a nine-inch scar than the old was able to realize from a scar 23 inches long.

Science News-Letter, March 26, 1927

The eyes of a fly are as rigid as the jewels of a watch.

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## Anniversaries of Science

**March 30, 1861**—Crookes announced the discovery of the new metallic element Thallium.

Some years previous to 1861 Crookes had been engaged in the extraction of selenium from a seleniferous deposit which he had obtained from the sulphuric-acid manufactory at Tilkerode in the Hartz Mountains. Some residues, left after the purification of the selenium, and supposed to contain tellurium, were set aside and not examined until 1861, when, needing tellurium, Crookes vainly tried to isolate it by various chemical methods. At length he resorted to spectrum analysis, and tested some of the residue in the flame. The spectrum of selenium appeared, and as it was fading, and he was looking for evidence of tellurium, a new bright-green line flashed into view. The element whose presence was thus indicated received the name Thallium, from *thallus*, a budding twig.

—Browning: *Introduction to the Rarer Elements*.

**April 4, 1617**—John Napier, inventor of logarithms, died.

Napier's conception of a logarithm involved a perfectly clear apprehension of the nature and consequences of a certain functional relationship, at a time when no general conception of such a relationship had been formulated or existed in the minds of mathematicians, and before the intuitional aspect of that relationship had been clarified by means of the great invention of coordinate geometry made later in the century by Rene Descartes. A modern mathematician regards the logarithmic function as the inverse of an exponential function; and it may seem to us, familiar as we all are with the use of operations involving indices, that the conception of a logarithm would present itself in that connection as a fairly obvious one. We must, however, remember that, at the time of Napier, the notion of an index in its generality, was no part of the stock of ideas of a mathematician, and that the exponential notation was not yet in use.

—Hobson: *John Napier and the Invention of Logarithms*.

**April 5, 1827**—Birth of Lord Lister, pioneer in antiseptic surgery.

Early in his hospital experience, Lister had been deeply impressed with the high mortality from such surgical pests as septicemia, pyemia, erysipelas, tetanus, and hospital gangrene. . . . These were the days of "laudable pus," yet Lister had already begun to think of the old Hippocratic healing by first intention as the surgeon's ideal. Noticing that the latter, when attainable, was always dissociated from putrefaction, his attention was actually drawn to Pasteur's work, and, immediately grasping its tendency, he set out definitely to prevent the development of microorganisms in wounds. Perceiving that Pasteur's heat sterilizations would avail nothing here, he turned to chemical antiseptics, and, after trying out chloride of zinc and the sulphites, he hit, by lucky chance, upon carbolic acid, which had been employed, a short while before, in disinfection of sewage at Carlisle. . . . Modern surgery, it is true, has become almost entirely aseptic, in the sense

of discarding strong antiseptics in the dressing of wounds, but in both the Listerian ideal of avoiding sepsis remains the same.

—Garrison: *History of Medicine*.

Science News-Letter, March 26, 1927

### ENTOMOLOGY

## Insects Infest Skies

A new sport has been inaugurated—fishing for insects in the clouds. It is far more exciting than catching butterflies in the fields, for it involves an aeroplane ride or else use of the kite, beloved since boyhood.

That insects actually are present as much as half a mile above the ground has been demonstrated by Dr. E. P. Felt, New York State entomologist and Dr. B. R. Coad, U. S. entomologist of Tallulah, La. By means of traps using tanglefoot and attached to aeroplanes, Dr. Felt has caught flies of two species and an adult corn root maggot, at elevations of from 1,000 to 3,000 feet. One species of fly was identified as an insect that is ordinarily found close to the ground and in the shade. It was commonly believed that the insect could not occur more than ten feet above the ground. The Experiments of Dr. Coad at Tallulah indicate the general occurrence of small insects at even greater altitudes than the ones where they were trapped by Dr. Felt.

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### BOTANY

## "Greens" Sprout Best in Chill

Plant your garden greens early next spring if you want to get the most of your seeds to sprout. This section of the garden seems to prefer cool soil to sprout in, and some of the plants even seem to like it downright chilly. These indications are among the results of experiments by Dr. Felix Kotowski, of the College of Agriculture, Warsaw, Poland. He planted large numbers of seeds in sand, which he kept at several uniform temperatures until the young plants came up. In general, the warmer the soil the larger was the proportion of seeds that germinated, but one group of vegetables, including spinach, lettuce, parsley, cabbage and beets, gave better results at lower temperatures. The optimum temperature for spinach was 36 degrees Fahrenheit, not much above freezing. Parsley seeds germinated most abundantly at 45 degrees, and beets at 51 degrees.

Science News-Letter, March 26, 1927

Helium, the non-explosive gas used in airships, exists in the air in the proportion of one part in 185,000.

## Scientific Poetry Prizes

This week's scientific poetry prize, the fourth in our series, goes to Freeman Weiss, of Washington, D. C. Mr. Weiss got his inspiration from the columns of the Science News-Letter itself; perhaps you, too, can find in some item in this issue a theme upon which to grow lyrical.

**Conditions:** Poems, verses, rimes, jingles or what-have-you must be original and unpublished. They must express accurately some scientific fact or situation. Address: Poetry Editor, Science Service, 21st and B Sts., Washington, D. C. Keep a copy, as unavailable contributions can not be returned.

**Prizes:** One poem will be published each week. A prize of \$5.00 will be paid for each poem published.

### BIOLOGY—CHEMISTRY

## Geraniolorelei

This week's prize winning poem in the Science Service scientific poetry contest.

O Bugman! Say it presages  
Defeat of a dreaded foe:  
An item from NEWS-LETTER pages  
Will not from my memory go;  
The day is warm and the sun shines,  
And sweet is the summer air,  
A peach tree stands on the skyline  
Or maybe it is a pear.

'Craftily placed in its branches  
A trap for a beetle haul;  
A fragrant substance entrances,  
Seductive Geraniol,  
Wafts on the summer breezes  
A potent aroma,  
One that mightily pleases  
*Popilia japonica*.

And every Japanese beetle  
That dwells within a mile  
Hastes to the baited peach tree  
Lured by its potent wile;  
Blind to the deadly spray gun  
Which takes a terrible toll.  
Then is the beetle's day done:  
Thanks to Geraniol!

—Freeman Weiss.

Science News-Letter, March 26, 1927

Benjamin Franklin thought the wild turkey most suitable as the American national bird.

The Chinese often paint their houses with a mixture of powdered oyster shells and water.

Fossilized footprints of three-toed prehistoric animals were found in New England over 100 years ago, but were considered ordinary bird tracks.

## The Problem of Translation—

Science, probing the unknown universe, writes its findings in cryptic language. A stellar galaxy shining faintly in the heavens hides its splendor and its immensity in numbers and formulæ; a minute germ has thrust upon it a long Latin name. With the aid of such scientific shorthand and such technicalities, science pushes on to new discoveries and new heights.

Yet the facts and the methods of science must penetrate and permeate the whole fabric of civilization if the world is to become an increasingly better place to live in. The man in the street, the child in the school, the merchant in the counting house, the judge on the bench, the priest in the temple, all of those who make the world, must know, appreciate, understand and cherish the spirit of research and the power of thought.

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